

ABSTRACT OF THE DISCLOSURE

To regulate a laser welding process, an optical sensor detects the seam flank angle and/or the seam position of the laser welded seam directly following its formation, the resulting actual
5 measured information is compared with stored or externally provided nominal information to give a comparison result, and the position of the welding laser beam source is adjusted based on the comparison result to regulate-out any divergence between the actual measured information and the nominal information. The
10 apparatus includes a laser welding device including a welding laser beam source that moves along the joint to be welded, an optical sensor arranged directly on or following the laser welding device, and a circuit including a comparator that compares the actual measured information with the stored or
15 externally provided nominal information regarding the seam flank angle and/or the seam position. The laser beam source is movable to adjust the location and orientation of the generated laser beam and its penetration into the weld joint responsive to the comparison result.

USPS EXPRESS MAIL
EV 338 198 045 US
JULY 09 2003